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WO 2004/046505 A2 **US 6725061 A**
US 6392561 B1 **US 3090031 A**
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(54) Abstract Title: **Method and apparatus for transmitting sensor response data and power through a mud motor**

(57) Apparatus and methods for establishing electrical communication between an instrument subsection disposed below a mud motor and an electronics sonde disposed above the mud motor in a drill string conveyed borehole logging system. Electrical communication is established via at least one conductor disposed within the mud motor and connecting the instrument sub section to a link disposed between the mud motor and the electronics sonde. The link can be embodied as a current coupling link, a magnetic coupling link, an electromagnetic telemetry link and a direct electrical contact link. Two way data transfer is established in all link embodiments. Power transfer is also established in all but the electromagnetic telemetry link.

